Boeing Phantom Ray

From Wikipedia, the free encyclopedia

The **Boeing Phantom Ray** is a stealth unmanned combat air vehicle being developed by Boeing using company funds. The Phantom Ray is a demonstrator aircraft, about the size of a fighter that will conduct a program of test flights involving surveillance, ground attack and autonomous aerial refueling missions.[2][3]

Contents

Design and development

Phantom Ray	
Role	Unmanned Combat Air Vehicle
Manufacturer	Boeing Integrated Defense Systems
First flight	27 April 2011[1]
Status	Under development
Number built	1
Developed from	Boeing X-45C

The Phantom Ray project, called "*Project Reblue*" internally at Boeing, was first conceived in mid-2007, and started in earnest in June 2008. The project was secret, even within the company, except for a handful of executives and engineers, until May 2009.[4]

Developed by the Boeing Phantom Works, the Phantom Ray is based on the X-45C prototype aircraft[5] that Boeing originally developed for the Defense Advanced Research Projects Agency (DARPA), the U.S. Air Force, and the U.S. Navy Joint-Unmanned Combat Air System (J-UCAS) program. However, Phantom Ray was not aimed at any particular program or competition.[6]

The Phantom Ray was unveiled on May 10, 2010 in St. Louis, Missouri.[3][7] In late November 2010 low-speed taxi tests were carried out in St. Louis.[8][9] The demonstrator aircraft is to perform 10 test flights over six months, supporting missions such as intelligence, surveillance and reconnaissance; suppression of enemy air defenses; electronic attack; hunter/killer; and autonomous aerial refueling.[2] Boeing anticipates that the Phantom Ray will be the first of a series of new prototype aircraft.[3]

The Phantom Ray was scheduled to make its first flight in December 2010 from NASA Dryden Flight Research Center,[3][8] but this was later rescheduled and the UAV took its maiden flight on April 27, 2011 from Edwards AFB,[10][11][12] having been carried there by the Boeing 747 Shuttle Carrier Aircraft.[10][12][13]

Although the Phantom Ray was not initially aimed at any programs, Boeing may use the design as an entry for the Navy's unmanned carrier-launched surveillance and strike (UCLASS) program.[14]

Specifications

Values for X-45 marked with an *.

Data from Debut,[3] Boeing backgrounder,[15] Airforce Technology X-45,[16] Boeing X-45 page[17]

General characteristics

- **Crew:** None (UCAV)
- **Length:** 36 ft (11 m)
- **Wingspan:** 50 ft (15 m)
- **Max takeoff weight:** 36,500 lb (16,556 kg)
- **Powerplant:** 1 × General Electric F404-GE-102D

Performance

- **Maximum speed:** Mach 0.85
- **Cruise speed:** 614 mph (534 kn; 988 km/h) ; Mach 0.8
- **Range:** 1,500 mi (1,303 nmi; 2,414 km) *
- **Service ceiling:** 40,000 ft (12,192 m) *

See also

Aircraft of comparable role, configuration and era

- BAE Taranis
- Dassault nEUROn
- EADS Barracuda
- MiG Skat
- Northrop Grumman X-47B

Related lists

- List of unmanned aerial vehicles

References

1. ^ PICTURES: Phantom Ray first flight raises funding hopes (http://www.flightglobal.com/articles/2011/05/04/356219/pictures-phantom-ray-first-flight-raises-funding-hopes.html)
2. ^ *a b* "Boeing to Develop, Fly 'Phantom Ray' Technology Demonstrator" (http://www.boeing.com/news/releases/2009/q2/090508b_nr.html) . Boeing, May 8, 2009.
3. ^ *a b c d e* Jackson, Randy. "Phantom Ray makes its debut in St. Louis" (http://www.boeing.com/Features/2010/05/bds_feat_phantomRay_05_10_10.html) . Boeing, May 10, 2010.
4. ^ Butler, Amy. "Boeing Unveils 'Phantom Ray' Combat UAS Demonstrator"

(http://www.aviationweek.com/publication/awst/loggedin/AvnowStoryDisplay.do?fromChannel=awst&channel=awst&pubKey=awst&issueDate=2009-05-11&story=xml/awst_xml/2009/05/11/AW_05_11_2009_p37-138670.xml&INTERCEPT_MESSAGES=S_IP_AUTH&PRIOR_REQUEST_URL=%2Fpublication%2Fawst%2Floggedin%2FAvnowStoryDisplay.do%3FfromChannel%3Dawst%26channel%3Dawst%26pubKey%3Dawst%26issueDate%3D2009-05-11%26story%3Dxml%2Fawst_xml%2F2009%2F05%2F11%2FAW_05_11_2009_p37-138670.xml) . Aviation Week, May 11, 2009.
5. ^ "Boeing's Phantom Ray - the 'Phoenix' of UCAVs"

(http://www.aviationweek.com/aw/blogs/defense /index.jsp?plckController=Blog& plckScript=blogScript&plckElementId=blogDest& plckBlogPage=BlogViewPost& plckPostId=Blog%3a27ec4a53-dcc8-42d0- bd3a-01329aef79a7Post%3a0fc310f6-038d- 410a-8d24-5daeb366ef29& plckCommentSortOrder=TimeStampAscending) . Aviation Week.

6. ^ "Breaking: Boeing resurrects X-45C as 'Phantom Ray' testbed" (http://www.flightglobal.com/blogs /the-dewline/2009/05/breaking-boeing-resurrects- x-4.html) . Flight Global.

7. ^ Page, Lewis (11 May 2010). "'Phantom Ray' robot stealth jet rolls out" (http://www.theregister.co.uk /2010/05/11/phantom_ray_rollout/) . *Register*. http://www.theregister.co.uk/2010/05 /11/phantom_ray_rollout/. Retrieved May 12, 2010.

8. ^ *a b* Andrew Doyle (25). "AUVSI: Boeing makes progress with unmanned programmes" (http://www.flightglobal.com/articles/2010/08 /25/346541/auvsi-boeing-makes-progress- with-unmanned-programmes.html) . Reed Business Information 2010. http://www.flightglobal.com /articles/2010/08/25/346541/auvsi-boeing-makes- progress-with-unmanned-programmes.html.

9. ^ "Boeing Phantom Ray Completes Low-speed Taxi Tests" (http://boeing.mediaroom.com /index.php?s=43&item=1532) . Boeing, November 22, 2010.

10. ^ *a b* Trimble, Stephen. "Phantom Ray first flight

raises funding hopes" (http://www.flightglobal.com /articles/2011/05/04/356219/pictures-phantom- ray-first-flight-raises-funding-hopes.html) . Flight International, *May 4, 2011.*

11. ^ Video: Phantom Ray Drone Makes Maiden Solo Flight | Popular Science (http://www.popsci.com /technology/article/2011-05/video-phantom- ray-drone-makes-maiden-solo-flight)

12. ^ *a b* "Boeing Phantom Ray Takes a Ride on NASA's Shuttle Carrier Aircraft" (http://boeing.mediaroom.com/index.php?s=43& item=1559) . Boeing, December 13, 2010.

13. ^ LaBelle, Kurt. "Phantom Ray Takes A Piggy Back Ride On 747" (http://www.fox2now.com/news/ktvi- phantom-ray-piggy- back-747-121310,0,6659350.story) . KTVI via fox2now.com, December 13, 2010.

14. ^ US Navy delays UCLASS RFP (http://www.flightglobal.com/news/articles/us-navy- delays-uclass-rfp-380098/) - Flightglobal.com, December 11, 2012

15. ^ Phantom Ray Backgrounder (http://www.boeing.com/bds/mediakit/2010/afa /pdf/bkgd_phantomray_0210.pdf) . Boeing, February 2010.

16. ^ X-45 J-UCAV Joint Unmanned Combat Air System, specifications (http://www.airforce- technology.com/projects/x-45-ucav/specs.html) . airforce-technology.com

17. ^ X-45 Joint Unmanned Combat Air System (http://www.boeing.com/history/boeing /x45_jucas.html) . Boeing.

Retrieved from "http://en.wikipedia.org/w/index.php?title=Boeing_Phantom_Ray&oldid=533713290"
Categories: Boeing aircraft | Flying wings | Stealth aircraft | Proposed aircraft of the United States | Unmanned aerial vehicles of the United States | Single-engined jets

Navigation menu